

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A method for designing tree-structured communication routes, in which plural ingress nodes, a single common egress node, plural connection nodes situated between said plural ingress nodes and said single common egress node, comprising the sequential steps of:

determining a set of plural routes starting from each of said plural ingress nodes, via said plural connection nodes, to said common egress node;

determining whether a first condition that any node, except said egress node, in a selected route successively selected from said set of plural routes, does not appear on another route, is satisfied, and when the first condition is satisfied, adding a predetermined point to a score of the route;

determining whether a second condition that, when there is a common node, in addition to said common egress node, which appears in both said selected route and said another route, and said selected route agrees with said another route from said common node to said common egress node, is satisfied, and when the second condition is satisfied, adding [[a]] the predetermined

point to [[a]] the score of [[a]] the route successively selected from said set of plural routes; [[,]]

successively selecting said routes in reverse order of said scores of said routes; [[,]]

respectively generating a first tree, extending from at least two of said plural ingress nodes to said common egress node, from said route with a lowest score and said other routes based on shared routings, along said route and said other routes, to the common egress node; [[,]] and

successively generating other trees, extending from at least one of said plural ingress nodes to said common egress node, from said other routes which are unable to generate said first tree, based on shared routings along said other routes to the common egress node[[,]]

~~wherein said step of adding said predetermined point to said score of said selected route is carried out whenever either of~~

~~(1) a first condition that any node, except said egress node, in a selected route does not appear on another route and,~~

~~(2) a second condition that, when there is a common node, in addition to said common egress node, which appears in both said selected and another routes, and said selected route agrees with said another route from said common node to said common egress node, is satisfied.~~

2. (original) The method for designing tree-structured communication route as defined in claim 1, wherein:

said predetermined point to be added to said score of said selected route is +1 point.

3. (original) The method for designing tree-structured communication route as defined in claim 1, wherein:

said route is regarded as a route or a tree.

4. (currently amended) A tree-structure solution derived by means of a method for designing tree-structured communication routes, in which plural ingress nodes, a single egress node, plural connection nodes situated between said plural ingress nodes and said single egress node, and a set of plural routes starting from said plural ingress nodes to said single egress node via said plural connection nodes are given, comprising the steps of:

determining whether a first condition that any node, except said egress node, in a selected route successively selected from said set of plural routes, does not appear on another route, is satisfied and when the first condition is satisfied, adding a predetermined point to a score of [[a]] the route successively selected from said set of plural routes, each of the routes starting with one of the ingress nodes and ending with the single egress node,

determining whether a second condition that, when there is a common node, in addition to said egress node, which appears in both said selected and another routes, and said selected route agrees with said another route from said common node to said egress node, is satisfied and when the second condition is satisfied, adding the predetermined point to the score of the route,

successively selecting said routes in reverse order of said scores of said routes,

respectively generating a first tree from said route with a lowest score and said other routes based on shared routings, between said route and said other routes, to the single egress node, and

successively generating other trees from said other routes which are unable to generate said trees based on shared routings, between the other trees, to the single egress node -
~~wherein said step of adding said predetermined point to said score of said selected route is carried out whenever satisfying either of~~

~~(1) a first condition that any node, except said egress node, in a selected route does not appear on another route and,~~

~~(2) a second condition that, when there is a common node, in addition to said egress node, which appears in both said selected and another routes, and said selected route agrees with said another route from said common node to said egress node.~~

5. (currently amended) A recording medium recording a tree-structure solution derived by means of a method for designing tree-structured communication routes, in which plural ingress nodes, a single egress node, plural connection nodes situated between said plural ingress nodes and said single egress node, and a set of plural routes starting from said plural ingress nodes to said single egress node via said plural connection nodes are given, comprising the steps of:

determining whether a first condition that any node, except said egress node, in a selected route does not appear on another route, is satisfied and when the first condition is satisfied, adding a predetermined point to a score of [[a]] the selected route successively selected from said set of plural routes, each of the routes starting with one of the ingress nodes and ending with the single egress node,

determining whether a second condition that, when there is a common node which appears in both said selected and another routes, and said selected route agrees with said another route from said common node to said egress node, is satisfied and when the second condition is satisfied, adding the predetermined point to the score of the selected route,

successively selecting said routes in reverse order of said scores of said routes,

respectively generating a first tree from said route with a lowest score and said other routes based on shared

routings, between said route and said other routes to the single egress node, and

successively generating other trees from said other routes which are unable to generate said first tree, said other trees based on shared routings of the other routes to the common egress node,

~~wherein said step of adding said predetermined point to said score of said selected route is carried out whenever satisfying either of~~

~~(1) a first condition that any node, except said egress node, in a selected route does not appear on another route and,~~

~~(2) a second condition that, when there is a common node which appears in both said selected and another routes, and said selected route agrees with said another route from said common node to said egress node,~~

wherein said tree-structure solution can be read by a computer.